

COLLEGIATE OUTDOOR ORIENTATION PROGRAMMING AS A HIGH-IMPACT PRACTICE

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Abstract

Outdoor orientation programs (OOPs) use wilderness or adventure experiences as a transition of incoming first-year students to college and university settings. We explored resilience and flourishing outcomes from two OOP trips in Virginia and North Carolina using the Brief Resilience Scale, the Mental Health Continuum Short Form, and a thematic analysis of participant responses to open-ended survey items. Results illustrate a statistically significant, large effect size difference in flourishing between pre- and post-trip responses ($d = .89$), and the thematic analysis of open-ended post-trip questionnaire items illustrated the attainment of each of the program's OOP objectives. These results mirror previous findings evidencing the continued importance of this form of experiential learning to engender student success in higher education settings and further justify OOPs' inclusion within a high-impact practices framework. Keywords: outdoor orientation program (OOPs), high impact practices, resiliency, flourishing, student success

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The Association of American Colleges and Universities (AAC&U) sets guidelines for high-impact practices (HIPs), which are defined as educational programs and experiences shown to increase student success (Kuh, 2008). HIPs currently include learning communities, writing-intensive courses, collaborative assignments and projects, undergraduate research, diversity and global learning, e-portfolios, service or community-based learning, internships, common intellectual experiences, capstone course and projects, and first-year seminars and experiences (AAC&U, 2021). A wealth of research also explores the beneficial integration of outdoor recreation and education within various HIPs, including but not limited to the experience from learning communities (Hill et al., 2020), undergraduate research (Ahl et al., 2020; Finn, 2017), and leadership development (Sandberg et al., 2017). The largest segment of research at the intersection of HIPs and outdoor recreation is focused on the first-year experience of outdoor orientation programs (OOPs) (e.g., Andre et al., 2017; Austin et al., 2010; Bailey & Kang, 2015; Howard et al., 2016; Pickard et al., 2020; Ribbe et al., 2016; Wolfe & Kay, 2011;).

Outdoor orientation programs (OOPs) use nature-based or adventure experiences to assist in transitioning incoming first-year students to college and university settings (Ribbe et al., 2016; Howard et al., 2016). OOPs are often three-to-five-day orientation programs that use experiences within the outdoors to promote challenge, opportunity, learning, and friendship. Some programs begin with a small group of students (6-10) participating in a challenge course/ropes course to learn about one another and set individual/group goals. These same groups may then transition to a three-day backpacking or canoeing trip with peer and/or faculty mentors while using outdoor recreation experiences to set goals for students' first year on campus. Nature-based experiences provide students opportunities to persevere and overcome obstacles with group support and nightly

facilitated discussions often accompany the day's activities. The process of debriefing helps leverage "a high degree of isomorphism" between the OOP experience and what might be faced during the first year of college (Hannah, 2018, p. 363).

OOPs formally began over 80 years ago at Dartmouth College, and by 2019 there were over 212 OOPs at 17 percent of the colleges and universities in the United States (Bell, 2022). OOP research indicates these experiences increase student success through the development of transferable skills during hands-on outdoor experiences (Pickard et al., 2020; Andre et al., 2017), the creation of relationships and social support systems (Austin et al., 2010), and fostering commitment and positive attitudes towards the university (Howard et al., 2016; Wolfe & Kay, 2011). Yet, despite ever-growing literature demonstrating their important co-curricular role in student success, there is no mention of OOPs specifically within the HIP framework. Thus, in this study, we expand on research investigating the impact of outdoor adventure education on noncognitive skill development (c.f., Richmond & Sibthorp, 2019) for university students, specifically through assessing resilience and flourishing outcomes from two OOP trips in Virginia and North Carolina. Results mirror previous OOP literature, which evidences the ability of this form of experiential learning to engender student success, further justifying OOPs' inclusion within a high-impact practices framework.

Literature Review and Theoretical Framework

High Impact Practices (HIPs) increase student success when implemented on college campuses (AAC&U, 2021). HIPs range in length, experience, and level of involvement. Some require students to be extensively engaged (e.g., living-learning communities) in less-comprehensive programs, which can be curricular or co-curricular (Goff et al., 2020). Some HIPs involve undergraduate research and service learning. The latter allows stu-

dents to learn from one another and develop relationships while assisting community partners (e.g., Battistoni, 1997, Cooper et al., 2013; Goff et al., 2020; Jacoby, 1996). In service-learning HIPs, the most effective programs are often coordinated partnerships that intentionally tailor the student experience to desired educational outcomes and the needs of community representatives to ensure the service aligns with all parties' goals (Bringle & Hatcher, 1999; Goff et al., 2014; Zlotkowski, 1999).

Regardless of the type of HIP, one key component often exists: reflection (Goff et al., 2014). For example, reflection can comprise of students answering question prompts intended to foster a deeper understanding of the experience, meaningful dialogue about the impact of the experience, or journaling. That said, even when time is intentionally set aside by instructors or facilitators, processing can be superficial in nature. Students may only share their brief impressions and may also lack structured opportunities to link their experience to the subject matter or to have their assumptions challenged (e.g., Eyler, 2002). Conversely, the immersive and relational strengths of OOPs not only allow for the acculturation of students to institutions of higher education but allow students to process the transitions they are undergoing and bolster their holistic well-being. The transitional value of these programs is crucial for students and continue to be a major outcome for institutions offering OOPs.

While OOPs often employ a variety of educational and psychological theories to structure programming, in this article, we focus on two – resilience and flourishing – critical to meeting the noncognitive skill development needs of 21st-century students in higher education contexts.

Resilience. Although there are numerous definitions for resilience (Hartling, 2008; Hill et al., 2015; Masten, 2001; Shellman & Hill, 2017), we used Wagnild and Young's (1993) conceptualization of resilience – one's ability to deal with and adapt to stress or adverse circumstances. Students who are not able to develop the necessary pro-

cesses to manage new stressors often leave higher education (Ribbe et al., 2016); thus, OOPs aim to alleviate the stress associated with this difficult transition period. In fact, like many programs in the literature (Samsudin et al., 2019; Shellman & Hill, 2017), the central objective for this OOP is for students to have the ability to 'bounce back' from stressors associated with a transition to college, and the ability to thrive in the college setting. Thus, allowing students to thrive or flourish during challenging times.

Flourishing. This second goal of 'thriving' highlights a factor vital to the success of first-year college students nationwide: well-being or flourishing (Keyes, 2006; Keyes, 2007; Ribbe et al., 2016). Flourishing focuses on how students function in the personal and social facets of their lives (Shellman & Hill, 2017). As stated by Keyes (2003), far from being super-individuals, flourishing individuals are truly living rather than merely existing. Many OOP studies provide evidence of the ability of these unique programs to assist in student flourishing (Shellman & Hill) and the vital role that flourishing plays in student success (Ribbe et al., 2016).

Studies also highlight the need for a sense of connectedness on a college campus to internalize flourishing (e.g., Shellman & Hill, 2017). Bell and colleagues (2014) illustrated why some students transition more effectively to higher education following their participation in OOPs. Additional studies have recently explored how goals, such as developing connections within OOPs, are attained through experience (Edwards et al., 2021; Hill et al., 2018; Shellman & Hill, 2017). OOPs have a rich history of evidence-based impact on students, yet little movement has taken place to identify these programs as a HIP. As we assert, this well-documented role of OOPs can help students flourish during what can be a transition fraught with socio-emotional challenges.

Methods

We highlight a two-year mixed methods study investigating whether OOPs assisted students in improving both their resilience and flourishing, as well as achieving program objectives associated with the HIP literature. This study replicates methods used by Hill et al., 2018, Posey et al., 2015, and Shellman & Hill, 2017, in part to demonstrate the durability of the findings related to OOPs and noncognitive skill development. Here we describe the settings, sample, instrument, and analyses that led to our findings.

Settings

Old Dominion University is an urban, minority-serving institution in the Mid-Atlantic region that serves approximately 25,000 students. Its outdoor adventure program (OAP) was established in 2006 and manages outdoor trips, the campus rock wall, and challenge course, as well as bike-share and rental programs. The first iteration of the OOP occurred in the summer of 2010 and was designed using an evidence-based programming model informed by the OOP literature (Bell & Chang, 2017; Howard et al., 2016; Lien & Goldenberg, 2012; Ribbe et al., 2016; Rude et al., 2017). Specifically, the five main objectives of this specific OOP are to: (1) ease the stress associated with the transition to college; (2) help students to develop connections; (3) foster the feeling of being welcome within the university community; (4) understanding more about university life; and (5) developing confidence in themselves and their abilities.

This university OOP offers two trip types each summer: (1) Cape Hatteras National Seashore (Cape Hatteras) in the Outer Banks of North Carolina, where participants tent camp and learn how to surf and bike on the island, and (2) Shenandoah National Park (Shenandoah), in Blue Ridge Mountains of Virginia, where participants learn how to backpack, tent camp, and rock-climb. OOPs are student-led with three trained peer leaders, who

are joined by a faculty mentor recruited from a diverse range of disciplines across campus. First-year student participants meet at the university on the first day of the 4-day trip, and after trip preparation and introduction activities, travel to their respective destinations. Each trip day uses a curriculum to help with the college transition, with different lessons in the form of discussions and activities, which include (1) challenges ahead, (2) asking for help, and (3) self-leadership. Students also participate in guided reflection on the trip with student staff, as well as when they return to the university.

Sample

This study used a convenience sampling approach, where all OOP participants in 2018 and 2019 were invited to complete pre-and post-test questionnaires in lieu of the standard program evaluation. All participants received informed consent information and were notified they could opt out of either or both of the pre-and post-test instruments. This study was approved by Old Dominion University's Institutional Review Board.

Instrument

Similar to previous data collection efforts on this OOP (e.g., Hill et al., 2018; Posey et al., 2015), we used a quasi-experimental mixed methods design to collect pre- and post-test questionnaire data. Specifically, to assess resilience, the Brief Resilience Scale (BRS) (Smith et al., 2008) was utilized, with six (6) questions in total measured on a 5-point Likert scale. To assess flourishing, the Mental Health Short Form (MHC-SF) (Keyes, 2009) was utilized as a unidimensional measure with fourteen (14)-items, indicated on a six (6)-point Likert scale. Both measures previously demonstrated acceptable psychometric properties (e.g., Hill et al., 2018; Keyes, 2009). Additionally, qualitative data were analyzed from open-ended items from 2019 post-trip surveys. Questions corresponded with the OOP goals (Table 1).

Analysis

To analyze questionnaire results, paired measures *t*-test analyses were used to assess significance between pre- and post-test on both subscales (i.e., BRS and MHC-SF). Both the BRS and MHC-SF were administered as paper copies before the trip and immediately upon returning. The goal was to determine if participation in this specific OOP would lead to an increase in both subscales at the post-test. Qualitative data were analyzed deductively using an *a priori* typology from the five OOP objectives. Occurrences within each category are represented by the frequency of importance of specific goals in participants' perceptions of the OOP experience.

Results

Across 2018 and 2019, a total of 27 participants from Old Dominion University completed and enrolled in this study. Seventeen participants attended the Cape Hatteras trip and 10 attended the Shenandoah trip. Participants' average age was 19, most were male (77.8%), and racial composition was predominantly white (81.5%) – Black or African American (7.4%), Hispanic or Latinx (7.4%), or Asian/Pacific Islander (3.7%) comprised the racial and ethnic identities of the remaining participants.

Paired samples *t*-test revealed the statistical significance of the 14-item MHC-SF from the pre-test ($M = 4.46$, $SD = 1.09$) to the post-test ($M = 4.83$, $SD = .93$), $t(27) = 4.653$, $p = .01$, $\alpha = .98$, $d = .89$. Although there was a slight increase in means, results from paired samples *t*-test of the BRS pre-test ($M = 3.99$, $SD = .57$) to post-test ($M = 4.14$, $SD = .63$) were non-significant, $t(27) = 1.923$, $p = .06$, Cohen's $d = .90$.

Program Objectives

Qualitative analyses of participants' open comment responses support each of the objectives of the OOP (Figure 1). Here, we combined objec-

tives 2 and 3 given what we found as overlapping content during deductive coding (i.e., developing connections is a major component in feeling welcome to a community). For example, as one student mentioned:

[My biggest takeaway from the trip was] the feeling that I belonged somewhere at [Old Dominion University] and almost like I had a home and my own little niche. I felt like I learned SO much more about myself and the university.

Another student mentioned, “[this trip helped me] by being a good place to ask questions; I felt safe with my questions because I wasn't asking them to strangers; I was asking them to people I connected with.” In sum, these two combined objectives had the most occurrences ($n = 11$; 42% of total occurrences). This data is supported within the resiliency literature as relationships are one of the assets of individuals who overcome adversity (e.g., Wolin & Wolin, 1993). The next most prevalent occurrence was objective 5 (i.e., to help students develop confidence in themselves and their abilities; 32%). “Independence,” “confidence,” “success,” and “grow” were key terms that frequently occurred within this category, wherein participants discussed where they gain self-efficacy in attempting new tasks, such as surfing, setting up tents, or navigating group formation with other new college students. This data supports the objective as these terms (e.g., success & growth) align with individuals who demonstrate flourishing in outdoor settings (e.g., Shellman & Hill, 2016) and among adolescence (Keyes, 2006). Objective 4, to help students understand more about university life, appeared in 16% of thematic occurrences. As participants described, they “learned more about preparation for class involvement and understanding the schedules created” and “the trip leaders really helped by answering the various questions we had about college. Resiliency is also evident in this objective. Insight is identified within the Wolins' (1993) model of resilient indi-

viduals and further supported in the recreation literature (Hill et al., 2018). Finally, “settled my nerves,” “easing into college,” and “less build-up on stress” were some key terms that were categorized into objective 1: to ease the stress associated with the transition to college (10%). This objective also aligns with Keyes (2009) work on thriving, well-being, and flourishing rather than languishing. Specifically, this is described as the extent to which people are thriving in their personal life in such areas as adjustment to transitions.

Discussion

The purpose of this study was to document the effects of an OOP on participants’ levels of resilience and flourishing. Our findings are similar to previous studies that explored flourishing within an OOP of a longer duration (14 days) (e.g., Shellman & Hill, 2017). In the following pages, we discuss our findings, share implications for future programming at [Old Dominion University], and revisit the case of OOPs inclusion as a stand-alone HIP.

Mental health continues to be highly important in the transition from high school to college, even more so now since the pandemic (e.g., Rogowska et al., 2020). Colleges are expected to address academic and inter/intra-personal needs, and as McNair and colleagues suggest (2016), the latter requires us to rethink the college experience. In turn, promoting HIPs, experiences that can help address flourishing and resiliency, is of the utmost importance. Data from this study helps to further demonstrate the efficacy of OOPs, beyond solely retention (Bell & Chang, 2017). Flourishing is grounded in the positive psychology framework (Keyes, 2006) and aligns well with the stated outcomes of many OOPs. The 27 students who participated in this current study demonstrated significant gains in flourishing, a finding which mirrors similar findings from other OOPs using the same metric (e.g., Shellman & Hill, 2017). Using outdoor experiences to expose individuals to new healthy

options can also be therapeutic (Allen et al., 2020). Data from the measure used in this study (i.e., MHC) suggest individuals with improved scores are thriving, something every university wants for all students. Using OOPs for incoming first-year students can ease that transition to higher education, help to alleviate stress, and welcome students to the higher education experience through spending a few short days away from campus, learning in a non-traditional college setting.

Resilience is of perennial importance for adolescent development (Posey et al., 2015). Although our current findings demonstrated little increase (i.e., non-significant), longer OOPs may yield significant increases (e.g., Shellman & Hill, 2017). Resiliency is a characteristic that takes more time for individuals to develop, to feel they can overcome adversity. The OOP experienced by these participants gave them real-life scenarios to demonstrate practical resilience, such as hiking for miles regardless of being fatigued, cooking over a stove in the dark, or struggling to hang a bag used to protect food supplies from small and large mammals while tent camping. Overcoming these challenges might not become internalized until later in the semester or later in life. Historical studies (i.e., Werner, 1982) explore the impact of resiliency over a 32-year-long observation of individuals. Other studies illustrate more success with younger adolescents, demonstrating an increase in resilience in multi-week programs (e.g., Brown et al., 2014; Hill et al., 2015).

The qualitative findings further demonstrate OOP’s potential to enhance resilience and flourishing. Students’ statements supported objectives 2 & 3 of this specific OOP: connecting with others and feeling welcome. Participants stated connecting with others (i.e., relationships) as an outcome of the program. The ability to form and nurture interpersonal relationships is noted as a character trait for those who demonstrate resilience (Wolin & Wolin, 1993). Since the arrival of Outward Bound – a leading nature-based leadership program – in the U.S. in the 1960s, numerous studies

report time in the outdoors in these nature-based programs creates strong bonds with others (Bobilya et al., 2011; Gassner et al., 2006; Hattie et al., 1997). Other evidence that aligned with this OOP, flourishing, and resilience is found in objective 5: developing confidence in oneself. This OOP, as most do, gave students a chance to try new things, which require effort, practice, and often failure prior to experiencing success. Rock climbing, orienteering, surfing, tent camping, and other outdoor-related experiences can all offer students the opportunity for trial and error and to cultivate what Dweck (2006) refers to as a “growth mindset.” Similarly, college is an exciting opportunity for new experiences, and many take practice and often result in initial failure. Accordingly, OOPs can provide students practice with these noncognitive skills that transfer to the college experience.

Implications for Practice

Quantitatively, results from a 4-day trip illustrate a significant impact on student flourishing and a large practical effect. These findings are similar to other programs using the outdoors to increase perceptions of flourishing among college students, albeit some of these programs are much longer in duration (e.g., Shellman & Hill, 2017). This implies program dosage (length) and associated resources expended may not necessarily contribute proportionately to the acquisition of these outcomes, though perhaps aid in the acquisition of others (i.e., resiliency on expeditions; Ewert & Yoshino, 2008). Additionally, while perhaps unique to this specific program, our qualitative results indicate that this OOP may consider refining the goals of this university to four objectives instead of five. For this university’s OOP, creating an objective stated as “to help students develop connections within the university community” can refine the previous two objectives without removing the essence of either original objective.

Factors contributing to student success appear frequently in research (AAC&U, 2021; Goff et

al., 2020; Shellman & Hill, 2017). As Johnson and colleagues (2016) illustrate, the academic motivation and success of both traditional and non-traditional college students correspond with both their academic and social involvement. First-year experiences can be particularly useful in assisting students in developing initial social circles and a sense of belonging, which has a positive impact on student retention (Wilcox et al., 2005). So, while OOPs might fit well in the description of a first-year experience, given their ability to create social bonds and foster belongingness and the obvious timing of participation, we suggest there are distinctions that justify OOPs stand-alone status as a HIP.

A first-year experience (FYE) gathers a small group of students with faculty or staff regularly throughout the first year of college. These programs emphasize certain academic skills, such as writing, information literacy, collaborative learning, and even research (Kuh, 2008). Though some OOPs are integrated into year-long programming (e.g., first-year adventure courses; Bell & Holmes, 2011), most occur for a short duration and emphasize group initiatives, leadership at a crucial moment in a student’s academic journey: transition to college. Thus, the short duration, high payoff for student success, and focus on this critical transition time differentiates OOPs from other FYEs. Further, Rogers and Lucas (2016) suggest universities require new approaches to ensure students are successful, resilient, and thriving. As we have evidenced, OOPs benefits are numerous, from mental health benefits, enhanced well-being, and increased peer support (e.g., Gómez & Hill, 2016; Hill & Gómez, 2019; Posey et al., 2015; Shellman & Hill, 2017).

Should OOPs be considered a high-impact practice? We think so. In this study, which replicated previous work (e.g., Shellman & Hill, 2017), we aimed to, again, highlight the beneficial role of OOPs in contributing to student success. After presenting findings from this mixed methods study of student resilience and flourishing, we

return to the broader OOPs literature to ask the question of why a co-curricular practice that promotes student flourishing (Shellman & Hill, 2017) increases retention (Bell et al., 2014), and aids in socialization (Gómez et al., 2014) is not included in the HIP list? Though the data we present from the current study is limited to one institution, it mirrors the wealth of findings we reviewed from the literature on OOPs, further bolstering the addition of their inclusion in the list of HIPs for institutions of higher education.

Limitations

While the argument for HIP inclusion is robust, two of the major challenges with our specific study were the limited sample size and diversity of participants. Old Dominion University is 56% female and a minority-serving institution, as it serves 25% or more of students who are African American. Our study was not representative of our student body regarding participation from females (22%) or minority students (7%). The lack of diversity in ODU's OOP is a common problem. At times it is attributed to a lack of diversity in trip leaders. ODU has made efforts in this area by recruiting student leaders of color, but minimal gains have been noted, and more work is needed. Related, the small sample size is often true of outdoor adventure education literature (Ewert, 2008), which often focuses on small-group experiential learning. However, OOPs at institutions of higher education are not necessarily all small-scale: Colby College, a liberal arts school in Central, Maine, annually sends approximately 500 incoming first-year students on "Colby Outdoor Orientation Trips," or "COOTs," throughout the state of Maine (2022). Comparatively, at Old Dominion University, due to the lack of robust institutional support for OOPs as a HIP, there were few trips in 2018 and 2019, and all trip groups were kept small (8 > participants). Replicating this study in future years across large sample sizes at institutions like Colby or across institutions would no doubt further

validate the importance of these HIPs. Similarly, short- and long-term follow-up surveys, and interviews would be beneficial to the longitudinal impact OOPs as they relate to the college experience.

Furthermore, OOPs are not immune to societal events: the COVID-19 pandemic severely impacted numerous outdoor programs across institutions of higher education, causing program closures, staffing shortages, and resource constraints (Leonard et al., 2022). So, while researchers documented the physical and mental health benefits of unstructured outdoor recreation throughout the pandemic (e.g., Scruggs et al., 2022), the institutional structures within higher education for schools that historically supported OOPs were, in many cases, not able to afford students these same benefits (Bell et al., 2022). As a result, these outdoor spaces of learning, where disease risk was much lower than in classroom or residence hall settings, were dramatically undervalued and underutilized worldwide (Quay et al., 2020). Future investment in OOPs may aid in buffering universities for future public health events, not just for orientation programming but also for year-long learning. These investments no doubt would promote the same, if not greater, levels of resilience and flourishing for students as they processed the dynamic changes in the world around them.

Conclusion

Transitioning into a collegiate setting can be a challenging experience full of uncertainty and anxiety. Intentionally programmed OOPs can help participants improve their ability to cope with these challenges. By assisting students to achieve a higher amount of well-being (flourishing), OOPs prepare students to embark on their collegiate journey better equipped than many of their peers. As we have reasoned, this begs the question, "Does flourishing matter?" Put differently, if institutions of higher education truly value the socioemotional foundations that enable self-actualization in their

student populations, the decades of data evidencing the impact of OOPs would surely support the inclusion of these programs as HIPs. Thus, we implore higher education administrators to follow the science and adopt these well-tested programs to enhance student success and truly enable students to flourish in their college careers.

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Table 1.

Sample summative questions for OOP participants.

What was your biggest takeaway from the trip?
 How are you feeling about starting college?
 What is your first impression of other college students?
 What is your first impression of [removed for review]?
 Do you feel more prepared for the start of your college life? If so, in what ways? If not, why not?

Note. These questions are only a subset of reflection prompts provided throughout the OOPs. Separate processing opportunities focused on challenges with transition, asking for help, and self-leadership was also facilitated.

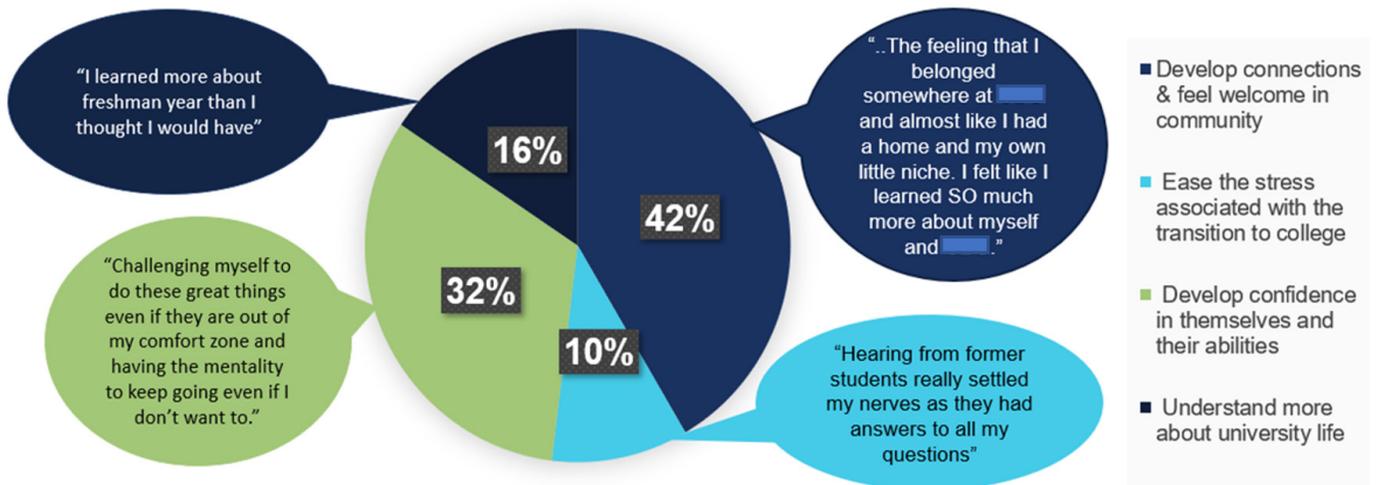


Figure 1. Frequency distributions by ODU's OOP objectives.